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ABSTRACT

Data collected in three recent reseach reports were examined to answer two basic questions about social science coverage in the news media. The first question, whether the media prefer social science stories to other kinds of science questions, was answered affirmatively by three kinds of evidence. First, combined analysis of 1977 and 1979 American Association for the Advancement of Science (AAAS) annual meeting stories indicated that among all the topics covered during the meetings, social science topics received by far the most attention from journalists. Second, of more than 100 symposia at the 1977 meeting alone, 10 generated more than half of the total newspaper coverage, with three of the five stories receiving the most space in daily newspapers across the country being on social science topics. Third, a national survey of scientists indicated that while nearly half of the social scientists reported contact with at least three journalists during the previous year, the physical/biological scientists had encountered none. The second question asked whether any variables could be isolated that might explain this preference pattern. The data suggested that the media prefer social science research to other kinds of research because (1) social science research in some ways more easily accommodates itself to the media production process than do other kinds of research; (2) social science research is more easily defended as "relevant to the audience"; and (3) social scientists are more accessible than are other kinds of scientists. (HTH)

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Mass Communication & Society Division
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Mass Media Coverage of the Social Sciences:

Some New Answers to Old Questions

Science reporters often refer to them as "garbage science," but the social sciences seem to have become a media staple. Almost daily, we are confronted with stories about violence in the home, changing career patterns for men and women, attempts to measure quality of life. You're hard pressed to find a medium that doesn't provide a regular diet of public opinion polls on every conceivable topic, from politics to religion.

Despite this, little is known about how the media cover the social sciences. We don't know what topics get picked or why. We don't even know what type of reporter is likely to end up covering social science research. We used to assume that the genesis of most stories was a science writer, but some scholars have suggested that--despite their official "sanction" as scientific disciplines--the social sciences aren't covered as science at all, that their emphasis on examining the behaviors of individuals and groups is precisely what makes them fodder for general reporters.[1]

The attempt of this paper, then, is to use some recently collected data dealing with science reporting in general to try to answer some basic questions about social science coverage in particular. The two basic questions are:

1. Do the mass media prefer social science stories to other kinds of science stories?

2. Can we isolate any variables that may help explain preference patterns that we might see in media story selections?

Since the data to be used here were not gathered expressly to explore media coverage of social science, they will at best provide only partial--sometimes marginal--responses to the questions posed. But in a field bereft of any baseline data, they will represent at least a starting point.

A Quick Look at Existing Literature

Empirical examinations of media coverage of social science are almost nonexistent. What we do have at this point is either in the form of case studies[2] or commentary.[3]

But elementary questions require elementary kinds of data. And those data have been elusive. Two scholars are in the process of remedying that situation through a large-scale study of what about social science research becomes news in major American newspapers,[4] but at present we are limited to relying on a scant number of small-scale studies of social scientists and journalists.

These studies provide some preliminary but contradictory data. For example, while one study of mass media science reporters found that these specialists rank social science very low on their list of personal interests, conceivably making them less likely to attend to it,[5] a survey of university scientists in one state found that social scientists were more likely to encounter journalists than were other types of scientists.[6] And an analysis of media coverage of a large, interdisciplinary science meeting in Australia found that social science topics ranked fourth in popularity (after health, meeting-as-event, and energy, respectively) in terms of numbers of stories produced by journalists covering the meeting.[7]

Three Data Sets

To answer the questions posed at the beginning of this paper, I have culled data from three separate studies. I'll briefly describe those data sets here; further details are available for the asking.

The first two data sets are based on media coverage of the annual meeting of the American Association for the Advancement of Science. The AAAS meeting

provides an ideal setting for analysis because it is a major media event that annually draws some 500 journalists to cover it. And it is an interdisciplinary science event; that is, the more than 100 symposia at the meeting offer discussions of a wide range of scientific topics. While social science is a definite part of the program, so are weapons technology, medicine and particle physics. Consequently, analysis of coverage of the meeting offers a rare chance to evaluate journalists' news selections relative to a universe of possible news topics.

Data set #1. This study of coverage of the 1977 AAAS meeting attempted to track news decision-making from source to publication by utilizing four stages of data gathering: (1) Pre-meeting interviews with AAAS personnel about how the meeting and its public information components got put together, and interviews with science reporters planning to cover the meeting; (2) Observation of the behaviors of both AAAS public information personnel and the science journalists during the meeting; (3) Content analysis of the 722 stories about the meeting published in daily newspapers and news magazines; and (4) Followup interviews with AAAS personnel and media reporters.

In the content analysis phase of the study, the individual published story was the unit of analysis. This means that a single wire service story that got picked up by 15 newspapers provided 15 separate cases for analysis. It will be important to distinguish this unit of analysis from that used in the second data set.

Data set #2. These data come from a content analysis of newspaper stories from both the 1977 and 1979 AAAS annual meetings. In this case, however, the unit of analysis was not the individual published story but the initial story

generated by a reporter, no matter how many times that story got reproduced in newspapers. In other words, a single story by a wire service reporter would count as one case for analysis, even if it got published in 15 different newspapers around the country. Both meetings generated a total of 484 initial stories, with 63% (300) coming from the 1977 Denver meeting and 38% (184) coming from the 1979 Houston meeting.

Although the unit of analysis differs across data sets 1 and 2, stories in both cases were coded for such variables as science content, source of information, and whether or not the reporter was a science writer.

Data set #3. In 1981 Prof. Michael Ryan (University of Houston)* and I conducted a mail survey of a sample of scientists listed in the reference work, American Men and Women of Science. Although social scientists represent a minority of scientists listed in the volumes, we oversampled that group; ultimately, our respondents--63% of the original sample of 456--were almost evenly divided between physical (52.8%) and social (47.2%) scientists. Among the items on the questionnaire were those probing the frequency with which respondents had encountered journalists within the past year.

Findings

These three data sets provide some preliminary answers to the two questions asked above. Let's take those questions one at a time:

Do the mass media prefer social science stories to other kinds of science stories?

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* Prof. Ryan played a major role in the acquisition of this data set. I would like to acknowledge his role at this point.

Three kinds of evidence suggest that the media indeed are more likely to publish social science stories than other types of science stories. The first piece of evidence comes from the combined analysis of 1977 and 1979 AAAS annual meeting stories. Table 1 indicates that, among all topics covered during the meetings, social science topics received by far the most attention from journalists. In fact, although social science symposia traditionally constitute

Table 1

Distribution of AAAS Meeting Stories

Chosen by Journalists,

by Subject Area

Subject area	Meeting		
	Both n=484	1977 n=300	1979 n=184
Social sciences	21.3%	22.3%	19.6%
Energy	11.0	10.3	12.0
Political and social aspects of science	10.5	13.7	5.4
Medicine	10.3	4.0	20.7
Space	10.1	12.0	7.1
Climate	6.4	10.3	----
Environment	5.4	5.7	4.9
Technology	4.3	3.3	6.0
Agriculture	4.3	5.3	2.7
Nutrition	3.3	1.3	6.5
Biology	2.9	1.7	4.9
Meeting as news	2.9	4.0	1.1
Advance stories	2.7	3.0	2.2
Physics/math/chemistry	1.7	1.0	2.7
Followup stories	1.2	1.0	1.6
Information systems	0.2	----	0.5
Other	0.4	0.3	0.5

a small proportion of the meeting (the AAAS meeting, in fact, devotes most of its time to the "hard" sciences), one out of five stories ultimately initiated by journalists dealt with social science topics. Only medicine competes in terms of popularity, and then only at the 1979 meeting.

A second piece of evidence comes from the analysis of the 1977 stories alone from data set #1. While the Table 1 data tell us about content areas chosen by journalists at the meeting, the data in Table 2 tell us something about the story decisions of newspapers across the country. This harks back to the difference in the unit of analysis between the first two data sets. Table 1 is based on data set #2, where the unit of analysis was the initial story. Table 2 is based on data set #1, where the unit of analysis was the published story. The former tells us something about the choices of journalists at the meeting, while the latter is a better indicator of editorial decisions made on newspapers around the country.

Table 2

The 10 Most Popular Topics Among Newspapers:

The 1977 Annual Meeting

Topic	No. of stories	Percentage of all stories (n=719)
*Violence at home and at school	85	11.8%
Sunspots and weather	60	8.3
*New migration patterns in the U.S.	53	7.3
Viking mission to Mars	40	5.5
*Head Start	31	4.3
Federal regulation of research	29	4.0
Weather modification	28	3.9
DNA	25	3.5
World food and pest losses	23	3.2
Wind energy	22	3.0
Total	396	54.9%

*Social science stories

Table 2 indicates that, of more than 100 symposia at the 1977 AAAS meeting, 10 generated more than half of the total newspaper coverage. And of the diet of stories made available to daily newspapers, editors across the country showed a strong preference for social science stories; three of the five stories receiving the most play in daily newspapers across the country were on social science topics.

Finally, a third piece of evidence from another quarter indicates that social scientists indeed encounter journalists more often than do other kinds of scientists. As Table 3 shows, the national survey of scientists by Dunwoody and Ryan found a clear pattern of differential exposure to journalists based on respondents' scientific bent. While nearly half of the social scientists reported contact with at least three journalists during the past year, a plurality of physical/biological scientists had just the opposite experience: they encountered no reporters. The chi square calculation for this table is statistically significant at $p<.001$.

Table 3

Amount of Journalistic Contact by Type of Scientist

Amount of contact by journalists in the past year	Type of Scientist	
	Social/Behavioral n=127	Physical/Biological n=144
0	23.6%	48.6%
1-2 journalists	26.8	25.0
3 or more journalists	49.6	26.4
	100.0%	100.0%

Thus, the data indicate that social sciences do seem to get preferential treatment by journalists, at least when offered within the kind of meeting

setting examined in two of the studies. Not only do journalists in these settings seem to gravitate to social science research but also newspaper editors apparently respond in the same way. The third study bolsters those findings more generally by indicating that, across the board, social scientists encounter journalists more often than do other kinds of scientists.

Now on to question #2:

Can we isolate any variables that may help explain preference patterns that we might see in media story selections?

This question is much harder to answer, given the three data sets. So while some of the variables posed here will be derived from an empirical base, I'll also be doing some speculating. But I'd like to suggest that the evidence here suggests that three factors do come into play. The media prefer social science research to other kinds of research because (1) social science research in some ways more easily accommodates itself to the media production process than do other kinds of research, (2) social science research is more easily defended as "relevant to the audience" than is research in other areas of science, and (3) social scientists are more accessible than other kinds of scientists.

Before examining the evidence for these three propositions, however, let's take a look at some apparently contradictory evidence concerning science reporters' attitudes toward social science and their propensity to cover it.

As noted earlier, science reporters employed by many of the prestige media in the United States don't put much store in social science.[8] They acknowledge their lack of training in social science theories and methodologies but at the same time don't hesitate to label social science "fuzzy" and beneath serious scrutiny. Such attitudes would suggest that these science reporters ought to

actively avoid social science, that given a choice of science topics, the last thing they would do would be to write about the social sciences. So in places such as the AAAS meetings, we should find science reporters preferring nearly anything else to social science. Curiously, they don't. As Table 4 shows, if anything, science reporters were more likely to do social science stories at the 1977 and 1979 AAAS meeetings than were other kinds of reporters. This table is based on data set #2, and it compares attention given to the most popular (among journalists) topics between science reporters and nonscience reporters.

Table 4

Percentage of Stories Devoted to the Most Popular Topics by Type of Reporter: 1977 and 1979 AAAS Meetings

	Number of Stories Written by Type of Reporter	
Story topic	Nonscience reporter stories n=147	Science reporter stories n=297
Social science	19.0%	22.9%
Energy	10.9	10.4
Political and social aspects of science	14.3	9.4
Medicine	9.5	10.8
Space	6.1	12.5

How does one explain this apparent contradiction? That question brings us back to the three factors mentioned earlier. The factors all reflect one main point: science reporters may not like the social sciences, but they perceive them to be easier to cover than other areas of science. Let's take a brief look at each of the three factors:

1. Social science research in some ways more easily accommodates itself to the media production process.

Reporters come to the AAAS annual meeting armed with daily, inflexible deadlines. For wire service reporters, those deadlines come at least twice a day. So it's important for reporters to select topics that can be covered quickly and with a minimum of effort. Observation at the 1977 AAAS meeting showed that a substantive amount of social science got covered because it involved the least effort. Here is one scenario from that meeting:

*A wire service reporter in search of a story for the afternoon cycle came to the press room at AAAS meeting headquarters and began sifting through the scientific papers available to reporters. The sifting stopped when he encountered a paper detailing shifts in human migration patterns; a Rand Corporation demographer suggested in the paper that more Americans are moving away from metropolitan areas than are moving to them "in one of the noteworthy reversals in migratory patterns in the nation's history." Grabbing the paper, the reporter headed for the typing room to do a story.

Our observational and self report data suggest that one reason why the migration story got written (and it subsequently became one of the most widely published stories from the meeting) was that--among a welter of technical papers in the AAAS papers room--this one was readable. A reporter in a hurry could quickly assess the content and could even write a story directly from the paper, with no time-consuming detour to the author for explanatory details.

It is important to note that during our observations of reporters at the 1977 AAAS meeting, instances of writing stories directly from research papers were witnessed only for social science topics. Clearly, a lot of social science gets covered at that meeting because reporters find social science papers to be more understandable than papers from other disciplines. The

clearer the initial information, the less effort required to produce a story. Ultimately, in other words, some of these social science stories may get covered not because they are viewed as important science, but rather because they seem to be manageable science, given the reporter's production constraints.

2. Social science is more easily defended as "relevant to the audience" than is research in other areas.

The social sciences ask questions about the behavior of people. So it is much easier to make a case for a social science story to an editor with no scientific expertise than it is to convince that editor of the value of a story about, say, research on the impact of insects on Third-World food crops. Here's another example from the AAAS meeting in 1977:

*By the end of the six-day meeting, lots of people--including reporters--had gone home. Those journalists remaining were casting about for a couple final stories, and one of the remaining press conferences attracted their attention. Researchers from the University of Rhode Island would be discussing findings of their survey of violence in the home and at school.

The science writers approached the press conference with their usual ho-hum attitude toward social science. In fact, the Associated Press science writer decided to devote his time to another story--a "real" science story--and delegated the press conference to an AP "stringer," a less experienced reporter hired to serve as backup.

The resulting story, however, got more play in daily newspapers than did any other story from the AAAS meeting that year. Editors leaped on it. And the AP stringer had the distinction of being the reporter whose work at the meeting generated more published stories than anyone else.

Of course, it's hard to ignore a lead like this: "For more than 5 million American children, punishment at home has meant being shot, stabbed, kicked, beaten and bitten by their parents, a new nationwide survey shows" (AP lead). But the popularity of this and other social science stories among daily newspaper editors strongly illustrates the ease with which social science can make its relevancy case.

3. Social scientists may be more accessible to journalists than other types of scientists.

Although social scientists play by the same rules as do other participants in our scientific culture, several factors may make social scientists easier for journalists to get at than other types of scientists. Two of these factors are type of employer and attitudes of social scientists toward the whole popularization process.

The Dunwoody and Ryan survey of scientists made it fairly clear that there's a relationship between a scientist's "public" visibility and her employer. As Table 5 shows, scientists working for private industry don't encounter journalists nearly as often as do scientists employed by either public institutions or government.

Table 5

Amount of Journalistic Contact by Employer

Amount of contact by journalists in the past year	Type of Employer University n=182	Government n=31	Industry n=50
0	31.9%	29.0%	58.0%
1-2 journalists	28.0	25.8	20.0
3 or more journalists	40.1	45.2	22.0
	100.0%	100.0%	100.0%

And guess who employs social scientists...? Of the social scientists responding to this survey (n=131), 81% were working in university settings, 8% in government and 10% in private companies. For comparison, 57% of the physical/biological scientists (n=150) worked in universities, 15% in government, and 25% in private industry.

Why do industry scientists encounter journalists less frequently than do other kinds of scientists? One answer is fairly obvious: private companies often are more interested in protecting information than in disseminating it.[9] But less obvious is that journalists may opt for publicly employed scientists anyway. At least one study indicates that information from industry is almost uniformly ignored by science journalists in their quest for science stories.[10]

Finally, social scientists may differ from other scientists in another kind of accessibility: willingness to cooperate with journalists in the popularization process. Although evidence is weak, Dunwoody and Ryan found that, while scientists generally regard public communication as a process that brings with it no rewards within science, the social scientists reacted <u>less negatively</u> to the "rewards" statement than did other kinds of scientists.[11] This may mean that social scientists perceive more rewards in the process of getting information into the public domain than do other kinds of scientists; at least the data do indicate that social scientists aren't as convinced that they will be punished by science as a social system for engaging in the public communication of their field. So they may indeed be more likely to agree to deal with journalists and with the mass media.

In Summary

The data from these three studies support the contention that social science gets more media attention relative to other kinds of science. Again, however,

the small-scale nature of these studies makes global statements suspect. Only with lots of data gathered over periods of time can one begin to talk with authority about "the nature of things."

But if future studies do buttress the notion that social scientists encounter journalists more often than do their physical/biological brethren, then the quest for explanatory variables can begin in earnest. What about the social sciences finds its way into the media? And why? How do the media deal with social science information (some critics suggest that the media treat it like froth, that social science research now reigns supreme as the light, fluffy component of today's "style" pages[12]). And what variables may account for differences in coverage of social sciences between print and broadcast media? For example, are the social sciences staples only for print media; are they generally less visual than other kinds of science, rendering them invisible for television purposes? Studies to date have examined only the print media, so such comparisons go unexamined.

Finally, knowledge about the pervasiveness of social science in the media may help determine strategies that social scientists might use to deal with the possiblity that they may be encountering journalists for the rest of their professional lives. If a journalist lurks around every corner, for example, it might be a good idea for a social scientist to learn more about journalism and about how to interact with reporters and editors. One might even begin to build into a social scientist's training a component geared specifically to examining public understanding of science efforts.

Scientists seem to be on the threshold of acknowledging the existence of the mass media as a major conduit for scientific information on its way into the

public domain. For social scientists, that acknowledgement may be even more crucial than for others.

Footnotes

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[4]Social scientists Eleanor Singer of Columbia University and Carol Weiss of Harvard University have been gathering data on media coverage of social science under a grant from the Russell Sage Foundation.

[5]S. Dunwoody, "The Science Writing Inner Club: A Communication Link Between Science and the Lay Public," Science, Technology, & Human Values 5:14-22, 1980.

[6]S. Dunwoody and B. Scott, "Scientists as Mass Media Sources," Journalism Quarterly 59:52-59, 1982.

[7]E. Chivilo, M. Staniford, M. Unkovich and J. Webb, "Newspaper Reporting of the 49th ANZAAS Congress," Search 11:243-245, 1980.

[8]Dunwoody, "The Science Writing Inner Club," op. cit.

[9]Among the works finding that scientists in private industry feel their employers restrict their ability to communicate are W. Kornhauser, Scientists in Industry (Berkeley: University of California Press, 1963); and S. Cotgrave and S. Box, Science, Industry and Society (London: George Allen & Unwin, Ltd., 1970).

[10]G. Jones, I. Connell and J. Meadows, "The Presentation of Science by the Media," mimeo, Primary Communications Research Centre, Leicester, Great Britain, 1978.

[11]S. Dunwoody and M. Ryan, "Factors Influencing Scientists as Journalistic Sources," paper presented to the annual meeting of the Association for Education in Journalism, Athens, OH, 1982.

[12]J. Grunig, untitled article in N. Metzger, ed., Science in the Newspaper, mimeo, American Association for the Advancement of Science, Washington, D.C., 1974, pp. 11-13.